



14421 County Rd. 10 • Ft. Lupton, Colorado 80621 • (303) 857-9999 • FAX (303) 857-0577 • E-MAIL Permitco 1@aol.com

December 14, 2006

Division of Oil, Gas & Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, UT 84114-5801  
Attn: Minerals

Re: Samson Resources Company  
NBSW #11-19-20-34  
1859' FSL and 811' FEL  
NE SE Section 20, T11S - R19E  
Uintah County, Utah

Gentlemen:

Enclosed please find one copy of the Application for Permit to Drill, along with one copy of the Onshore Order No. 1 which was filed with the BLM in Vernal, Utah.

If you should need additional information, please don't hesitate to contact me. Approved copies of the A.P.D. should be sent to Permitco Inc. at the address shown above.

Sincerely,

PERMITCO INC.

Venessa Langmacher  
Consultant for  
Samson Resources Company

Enc.

cc: Samson Resources Company - Denver, CO

RECEIVED

DEC 27 2006

DIV. OF OIL, GAS & MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐  
(highlight changes)

APPLICATION FOR PERMIT TO DRILL		5. MINERAL LEASE NO.: <b>UTU-81721</b>	6. SURFACE: <b>BLM</b>
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>		7. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>N/A</b>	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		8. UNIT or CA AGREEMENT NAME: <b>N/A</b>	
2. NAME OF OPERATOR: <b>Samson Resources Company</b>		9. WELL NAME and NUMBER: <b>NBSW #11-19-20-34</b>	
3. ADDRESS OF OPERATOR: <b>370-17th Street, Suite 3000, Denver, CO 80202</b>		10. FIELD AND POOL, OR WILDCAT: <b>Wildcat</b>	
PHONE NUMBER: <b>720/239-4387</b>		11. QTR/QTR, SECTION, TOWNSHIP, RANGE MERIDIAN: <b>Section 20, T11S - R19E</b>	
4. LOCATION OF WELL (FOOTAGES) <b>602001 X 4410 8924 39.843 812</b> AT SURFACE: <b>1859' FSL and 811' FEL</b> AT PROPOSED PRODUCING ZONE: <b>NE SE -109.807808</b>			
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>Approximately 26 miles Southwest of Ouray.</b>		12. COUNTY: <b>Uintah</b>	13. STATE: <b>UT</b>
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>1859'</b>	16. NUMBER OF ACRES IN LEASE: <b>1876.05</b>	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40 acres</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET): <b>Approx. 4250'</b>	19. PROPOSED DEPTH: <b>10,690'</b>	20. BOND DESCRIPTION: <b>Nationwide Bond No. NM-2037</b>	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>5891' GL</b>	22. APPROXIMATE DATE WORK WILL START: <b>ASAP</b>	23. ESTIMATED DURATION: <b>21 Days</b>	

24. PROPOSED CASING AND CEMENTING PROGRAM			
SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12-1/4"	9-5/8", 40#, J-55	3000'	408 sx Halliburton Hi-Fill, 11 ppg, 3.84 cf/sk; 268 sx Premium 15.8 ppg, 1.17 cf/sk
7-7/8"	5-1/2", 20 #, P-110	10,690'	769 sx Class HLC 11.6 ppg, 2.59 cf/sk; 305 sx 50/50 Poz 13.5 ppg, 1.49 cf/sk

25. ATTACHMENTS	
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:	
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

AGENT: <b>PermitCo Inc., 14421 County Road 10, Fort Lupton, CO 80621</b>		AGENT'S PHONE NO.: <b>303/857-9999</b>	
NAME (PLEASE PRINT) <b>Venessa Langmacher</b>	TITLE <b>Agent for Samson Resources Company</b>		
SIGNATURE <i>Venessa Langmacher</i>	DATE <b>December 14, 2006</b>		
(This space for State use only)			

API NUMBER ASSIGNED: **43-047-38945**

Approved by the  
Utah Division of  
Oil, Gas and Mining

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DEC 27 2006

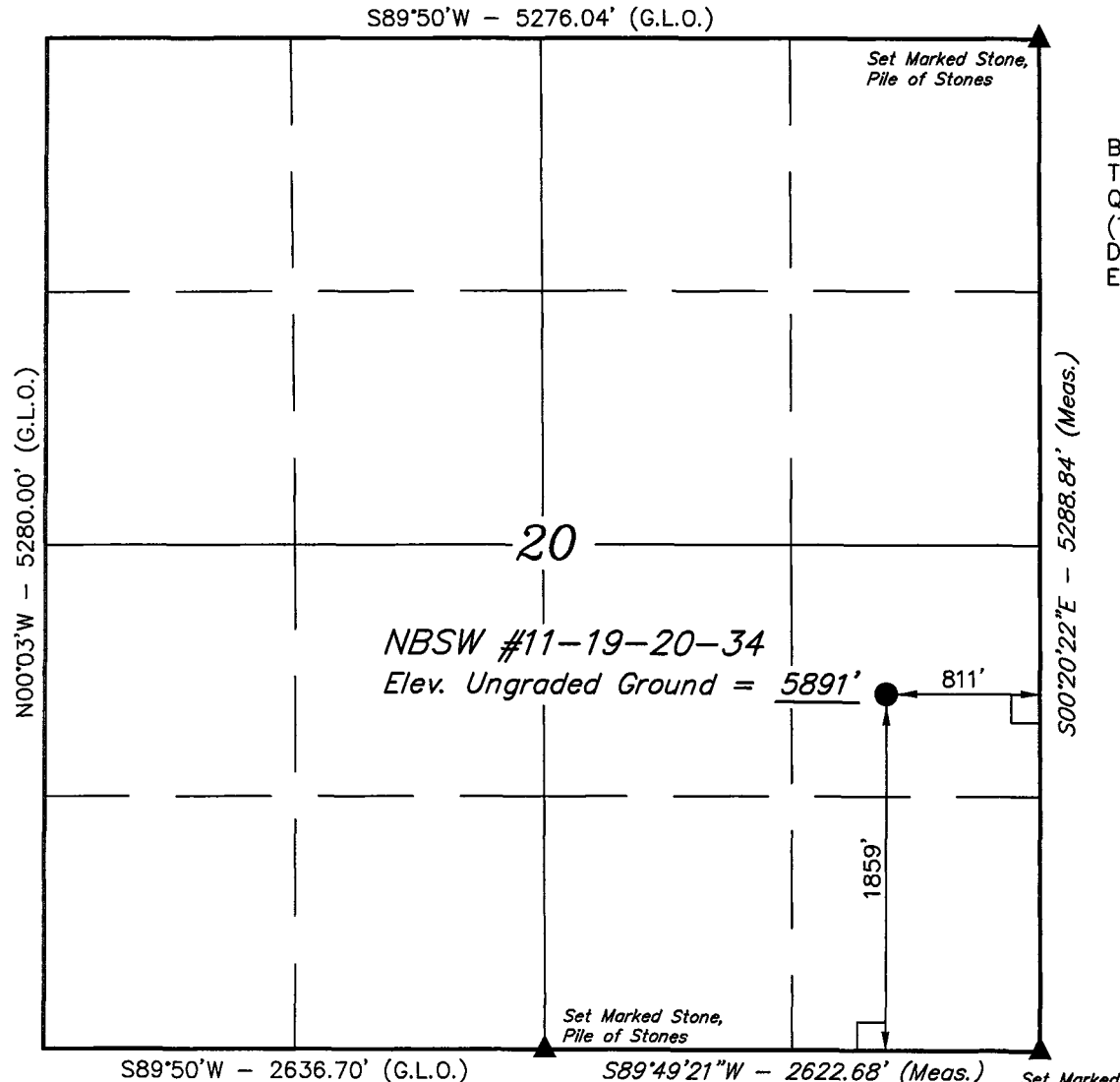
(11/2001)

Federal Approval of this  
Action is necessary

(See instructions on Reverse Side)  
Date: **12-28-06**  
By: *[Signature]*

DIV. OF OIL, GAS & MINING

*T11S, R19E, S.L.B.&M.*



**LEGEND:**

- └ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

(AUTONOMOUS NAD 83)  
 LATITUDE = 39°50'37.18" (39.843661)  
 LONGITUDE = 109°48'30.22" (109.808394)  
 (AUTONOMOUS NAD 27)  
 LATITUDE = 39°50'37.31" (39.843697)  
 LONGITUDE = 109°48'27.71" (109.807697)

**SAMSON RESOURCES CO.**

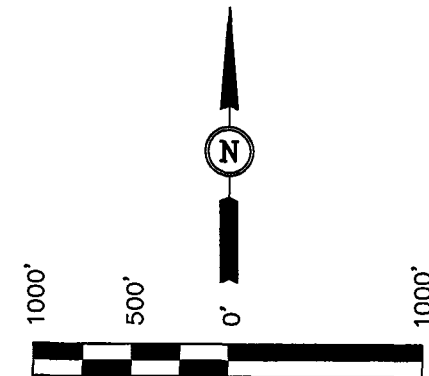
Well location, NBSW #11-19-20-34, located as shown in the NE 1/4 SE 1/4 of Section 20, T11S, R19E, S.L.B.&M. Uintah County, Utah.

**BASIS OF BEARINGS**

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

**BASIS OF ELEVATION**

BENCH MARK (40WF) LOCATED IN THE NW 1/4 OF SECTION 28, T11S, R19E, S.L.B.&M. TAKEN FROM THE NUTTERS HOLE QUADRANGLE, UTAH, UTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5945 FEET.



**SCALE  
CERTIFICATE**

THIS IS TO CERTIFY THAT THE ABOVE MAP WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
 REGISTRATION NO. 161319  
 STATE OF UTAH  
 [Signature]  
 No. 161319

REVISED: 03-17-06 L.K.

**UINTAH ENGINEERING & LAND SURVEYING**  
 85 SOUTH 200 EAST - VERNAL, UTAH 84078  
 (435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 11-29-04	DATE DRAWN: 12-21-04
PARTY G.O. B.C. E.C.O.	REFERENCES G.L.O. PLAT	
WEATHER COLD	FILE SAMSON RESOURCES CO.	

## APPLICATION FOR PERMIT TO DRILL OR REENTER

### 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.

**Attached.**

2. A Drilling Plan

**Attached.**

3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the Appropriate Forest Service Office.

**See Surface Use Plan Attached.**

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20).

**Bond coverage for this well is provided by Samson Resources Company under their Nationwide Bond No. NM-2037.**

5. Operator certification.

**Please be advised that Samson Resources Company is considered to be the operator of the above mentioned well. Samson Resources Company agrees to be responsible under the terms and conditions of the lease for the operations conducted upon the leased lands.**

6. Such other site specific information and/or plans as may be required by the authorized officer.

ONSHORE ORDER NO. 1  
Samson Resources Company  
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**ONSHORE OIL & GAS ORDER NO. 1**  
**Approval of Operations on Onshore**  
**Federal and Indian Oil and Gas Leases**

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

**1. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS**

<i>Formation</i>	<i>Depth</i>	<i>Subsea</i>
Green River	1,140'	+4,755'
Wasatch	4,190'	+1,705'
Mesa Verde	6,790'	-895'
Mancos	10,190'	-4,295'
T.D.	10,690'	-4,795'

**2. ESTIMATED DEPTH OF ANTICIPATED WATER, OIL, GAS OR MINERAL FORMATIONS:**

<i>Substance</i>	<i>Formation</i>	<i>Depth</i>
Fresh Water & Oil	Green River	1,140'
Oil & Gas	Wasatch	4,190'
Gas	Mesa Verde	6,790'
Gas	Mancos	10,190'

All fresh water prospectively valuable minerals encountered during drilling, will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.



**3. PRESSURE CONTROL EQUIPMENT**

Samson Resources Company's minimum specifications for pressure control equipment are as follows:

Ram Type: 11" Hydraulic double with annular, 5000 psi w.p.

**For drilling surface hole to 3,000':**

No BOP equipment required. Rotating head will be utilized if a Surface Hole Drilling rig equipped to drill with air/air mist is used to preset surface casing.

**For drilling through 9-5/8" surface casing to TD:**

Maximum anticipated surface pressure is <5,000 psi.

Pressure control equipment shall be in accordance with BLM minimum standards for 5,000 psi equipment.

A casing head with an 11", 5,000 psi flange will be welded onto the 9-5/8" surface casing.

BOP stack will consist of either 3 single gates or a single gate and a double gate and annular preventer. The gate preventers will be equipped with 2 pipe rams on bottom and blind rams on top. The choke and kill lines will be connected to outlets between the bottom and top pipe rams, utilizing either the ram body outlet or a drilling spool with side outlets. The BOP stack will be 11" or 13-5/8" bore, 5,000 psi working pressure or greater. The choke and kill lines will be 2" or 3" bore, 5,000 psi working pressure or greater. Please refer to attached schematic.

Test procedure and frequency shall be in accordance with BLM minimum standards for 5,000 psi equipment, per BLM Oil & Gas Order #2.

Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 70 percent of internal yield pressure of casing. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer. If a test plug is utilized, no bleed-off pressure is acceptable. For a test not utilizing a test plug, if a decline in pressure of more than 10 percent in 30 minutes occurs, the test shall be considered to have failed. Valve on casing head below test plug shall be open during test of BOP stack.



Annular type preventers (if used) shall be tested to 50 percent of rated working pressure. Pressure shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer.

As a minimum, the above test shall be performed:

- a. when initially installed;
- b. whenever any seal subject to test pressure is broken
- c. following related repairs; and
- d. at 30-day intervals

Valves shall be tested from working pressure side during BOPE tests with all down stream valves open.

When testing the kill line valve(s) the check valve shall be held open or the ball removed.

Annular preventers shall be functionally operated at least weekly.

Pipe and blind rams shall be activated each trip, however, this function need not be performed more than once a day.

A BOPE pit level drill shall be conducted weekly for each drilling crew.

Pressure tests shall apply to all related well control equipment.

All of the above described tests and/or drills shall be recorded in the drilling log.

BOP systems shall be consistent with API RP53. Pressure tests will be conducted before drilling out from under casing strings which have been set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection will be recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

The District Office should be notified, with sufficient lead time, in order to have the BLM representative on location during pressure testing.



- a. The size and rating of the BOP stack is shown on the attached diagram. Although a rig has not been chosen to drill this well, most of the equipment for this depth of hole in the area use a 11", 5000 psi working pressure blowout preventor.
- b. A choke line and a kill line are to be properly installed. The kill line is not to be used as a fill-up line.
- c. The accumulator system shall have a pressure capacity to provide for repeated operation of hydraulic preventers.
- d. Drill string safety valve(s), to fit all tools in the drill string, are to be maintained on the rig floor while drilling operations are in progress.

**4. PROPOSED CASING AND CEMENTING PROGRAM:**

- a. The proposed casing and cementing program shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. Determination of casing setting depth shall be based on all relevant factors, including; presence/absence of hydrocarbons; fracture gradients; usable water zones; formation pressures; lost circulation zones; other minerals; or other unusual characteristics. All indications of usable water shall be reported.
- b. Casing design shall assume formation pressure gradients of 0.44 to 0.50 psi per foot for exploratory wells (lacking better data).
- c. Casing design shall assume fracture gradients from 0.70 to 1.00 psi per foot for exploratory wells (lacking better data)
- d. Casing collars shall have a minimum clearance of 0.422 inches of all sides in the hole/casing annulus, with recognition that variances can be granted for justified exceptions.





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- e. All waiting on cement times shall be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.
- f. All casing except the conductor casing, shall be new or reconditioned and tested used casing that meets or exceeds API standards for new casing.
- g. The surface casing shall be cemented back to surface either during the primary cement job or by remedial cementing.
- h. All indications of usable water shall be reported to the authorized officer prior to running the next string of casing or before plugging orders are requested, whichever occurs first.
- i. Centralizers will be placed 10' above shoe, on 1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup> and last collars.
- j. Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a suitable preflush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.
- k. All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.
- l. On all exploratory wells, and on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- m. The proposed casing program will be as follows:

<b>Purpose</b>	<b>Depth</b>	<b>O.D.</b>	<b>Weight</b>	<b>Grade</b>	<b>Type</b>	<b>Stage</b>	<b>Centralizer</b>	<b>New/Used</b>
Surface	0-3,000'	9-5/8"	40#	J-55	ST&C	No	See Note on 4i	New
Production	0-10,690'	5-1/2"	20#	P-110	LT&C	No	As needed	New



- n. Casing design subject to revision based on geologic conditions encountered.
- o. The cement program will be as follows:

<b>Surface</b>	<b>Type and Amount</b>
TOC @ Surface	Lead: 408 sx Halliburton Hi-Fill @ 11 ppg, 3.84 ft3/sx yield. Tail: 268 sx Halliburton @ 15.8 ppg, 1.17 ft3/sk yield. *A top job will be pumped if cement return are not seen.
<b>Production</b>	<b>Type and Amount</b>
200' above shoe	Lead: 769 sx Class HLC @ 11.6 ppg, 2.59 ft3/sk yield Tail: 305 sx 50/50 Poz @ 13.5 ppg, 1.49 ft3/sk yield

- p. All volumes are estimates and may be adjusted based upon actual conditions during the course of drilling operations. Total sacks may be adjusted due to slight variations in slurry yield.
- q. Drilling of the surface hole will be with a Surface Hole drilling rig equipped to drill with air/air mist if the rig is available. Hole size will be in the 12-1/4" - 11" range at the discretion of the drilling contractor.
- r. Variance to Onshore Oil and Gas Order No. 2 III-E. Special Drilling Operations which addresses additional drilling equipment required for drilling with air/gas is requested for the Surface Hole drilling rig which may be used to preset surface casing. To our knowledge, shallow gas (<3,000') has never been encountered on any well in this area. Consequently, the majority of the equipment specified in the Special Drilling Operations is not necessary to drill surface holes (3,000') in this area. Auxiliary Equipment to be used is outlined in Section 8. Air/gas will not be used to drill below surface casing.
- s. If the surface hole drilling rig is not available to preset the surface casing a conventional rotary drilling rig will be used to drill the surface hole. A 12-1/4" hole will be drilled utilizing fresh water mud.



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- t. Anticipated cement tops will be reported as to depth; not the expected number of sacks of cement to be used. The District Office should be notified, with sufficient lead time, in order to have a BLM representative on location while running all casing strings and cementing.
- u. After cementing but before commencing any test, the casing string shall stand cemented until the cement has reached a compressive strength of at least 500 psi at the shoe. WOC time shall be recorded in the driller's log.
- v. The following reports shall be filed with the District Manager within 30 days after the work is completed.
  - 1. Progress reports, Form 3160-5 (formerly 9-331) "Sundry Notices and Reports on Wells", must include complete information concerning:
    - a. Setting of each string of casing, showing the size, grade, weight of casing set, hole size, setting depth, amounts and type of cement used, whether cement circulated or the top of the cement behind the casing, depth of cementing tools used, casing test method and results, and the date work was done. Show the spud date on the first reports submitted.
    - b. Temperature or bond logs must be submitted for each well where the casing cement was not circulated to the surface.
- w. Auxiliary equipment to be used is as follows:
  - 1. Mud Logging Unit
  - 2. Geolograph
  - 3. PVT-Flowmeter
  - 4. Desilter
  - 5. Desander
  - 6. Full Opening Safety Valve
  - 7. Upper Kelly Valve
  - 8. Lower Kelly Valve



**5. MUD PROGRAM**

- a. The proposed circulating mediums to be employed in drilling are as follows:

<i>Interval</i>	<i>Mud Type</i>	<i>Mud Wt.</i>	<i>Visc.</i>	<i>F/L</i>	<i>PH</i>
0' - 3,000'	Fresh Water	8.5-9.0	---	---	---
3,000' - TD	Water Based LSND	9.0-11.0	42-46	8-10	9.5-10

There will be sufficient mud on location to control a blowout should one occur.  
A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, static filtration loss, and Ph.

- b. Mud monitoring equipment to be used is as follows:
1. Periodic checks will be made each tour of the mud system. The mud level will be checked visually.
- c. No chromate additives will be used in the mud system on Federal and/or Indian lands without prior BLM approval to ensure adequate protection of fresh water aquifers.
- d. No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.
- e. The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

**6. EVALUATION PROGRAM**

The anticipated type and amount of testing, logging and coring are as follows:

- a. No drill stem tests are anticipated, however, if DST's are run, the following requirements will be adhered to:



Initial opening of drill stem test tools shall be restricted to daylight hours unless specific approval to start during other hours is obtained from the authorized officer. However, DST's may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e. lighting which is adequate for visibility and vapor-proof for safe operations). Packers can be released, but tripping shall not begin before daylight, unless prior approval is obtained from the authorized officer. Closed chamber DSTs may be accomplished day or night.

A DST that flows to the surface with evidence of hydrocarbons shall be either reversed out of the testing string under controlled surface conditions. This would involve provided some means for reverse circulation.

Separation equipment required for the anticipated recovery shall be properly installed before a test starts.

All engines within 100 feet of the wellbore that are required to "run" during the test shall have spark arresters or water cooled exhausts.

- b. The logging program will be as follows:  
Mud Logging: Surface Casing to TD.  
Electric Logging: A complete suite of open hole logs will be run.
- c. No cores are anticipated.
- d. Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with form 3160-4. Samples (cutting, fluids, and/or gases) will be submitted when requested by the authorized officer (AO).
- e. The anticipated completion program will be pending evaluation of open-hole logs, the productive intervals will be perforated, fracture treated, and cleaned up. 2-3/8", 4.7#, L/-80, EUE, 8rd or 2-7/8", 6.5#, L/-80, EUE, 8rd production tubing will be installed.



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- f. Daily drilling and completion progress reports shall be submitted to the BLM in Vernal on a weekly basis.

**7. ABNORMAL TEMPERATURES OR PRESSURES**

- a. The expected bottom hole pressure is 5880 psi. The maximum bottom hole temperature will be 250 degrees Fahrenheit.
- b. No hydrogen sulfide gas is anticipated. Abnormal Pressures will be controlled with the mud weight.

**8. ANTICIPATED STARTING DATES AND NOTIFICATION OF OPERATIONS**

- a. Drilling is planned to commence upon approval of this application.
- b. It is anticipated that the drilling of this well will take approximately 21 days.
- c. The BLM in Vernal, Utah shall be notified of the anticipated date of location construction commencement and of anticipated spud date.
- d. No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the AO. If operations are to be suspended, prior approval of the AO will be obtained and notification given before resumption of operations.
- e. The spud date will be reported orally to the AO within 48 hours after spudding. If the spudding occurs on a weekend or holiday, the report will be submitted on the following regular work day. The oral report will be followed up with a Sundry Notice.
- f. In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 3160-6 "Monthly Report of Operations", starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report will be filed with the Vernal BLM District Office, 170 South 500 East, Vernal, UT 84078.



- g. Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.
- h. If a replacement rig is contemplated for completion operations, a "Sundry Notice" Form 3160-5 to that effect will be filed, for prior approval of the AO, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.
- i. Should the well be successfully completed for production, the AO will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communications, not later than 5 days following the date on which the well is placed on production.
- j. Pursuant to Onshore Order No. 7, with the approval of the District Engineer, produced water may be temporarily disposed of into unlined pits for a period of up to 90 days. During the period so authorized, an application for approval of the permanent disposal method, along with the required water analysis and other information, must be submitted to the District Engineer.
- k. Pursuant to NTL-4A, lessees or operators are authorized to vent/flare gas during initial well evaluation tests, not exceeding a period of 30 days or the production of 50 MMCF of gas, whichever occurs first. An application must be filed with the District Engineer and approval received, for any venting/flaring of gas beyond the initial 30 day or authorized test period.
- l. A schematic facilities diagram as required by 43 CFR 3162.7-5 (b.9.d.), shall be submitted to the appropriate District Office within sixty (60) days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-5 (b.4.).
- m. A first production conference will be scheduled within 15 days after receipt of the first production notice.
- n. No well abandonment operations will be commenced without the prior approval of the AO. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the SO. A "Subsequent Report of Abandonment" Form



ONSHORE ORDER NO. 1  
Samson Resources Company  
**NBSW #11-19-20-34**  
1859' FSL and 811' FEL  
NE SE Section 20, T11S-R19E  
Uintah County, Utah

CONFIDENTIAL - TIGHT HOLE

**Lease No. UTU-81721**

**DRILLING PROGRAM**

Page 12

3160-5, will be filed with the AO within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the AO or his representative, or the appropriate Surface Managing Agency.

- o. Pursuant to Onshore Oil and Gas Order No. 1, lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in a manner which conforms with applicable Federal laws and regulations and with State and local laws and regulations to the extent that such State and local laws are applicable to operations on Federal or Indian lands.

Bureau of Land Management 170 South 500 East Vernal, Utah 84078		
Phone: 435/781-4400		Fax: 435/781-4410
After Hours:		
Matt Baker	Petroleum Engineer	435/828-4470
Michael Lee	Petroleum Engineer	435/828-7875

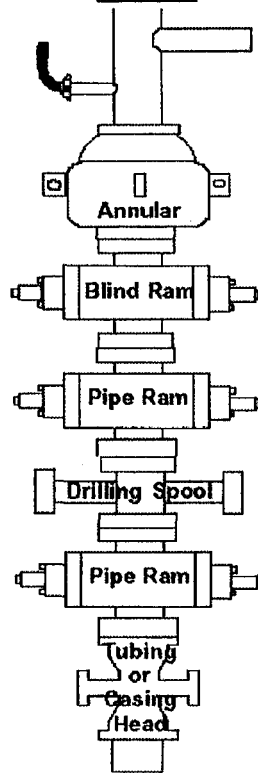




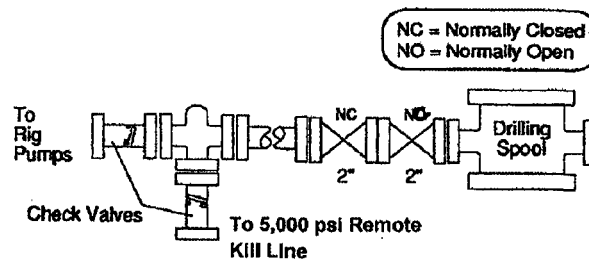
# BOP Schematic

## CLASS IV 5,000 psi BOP

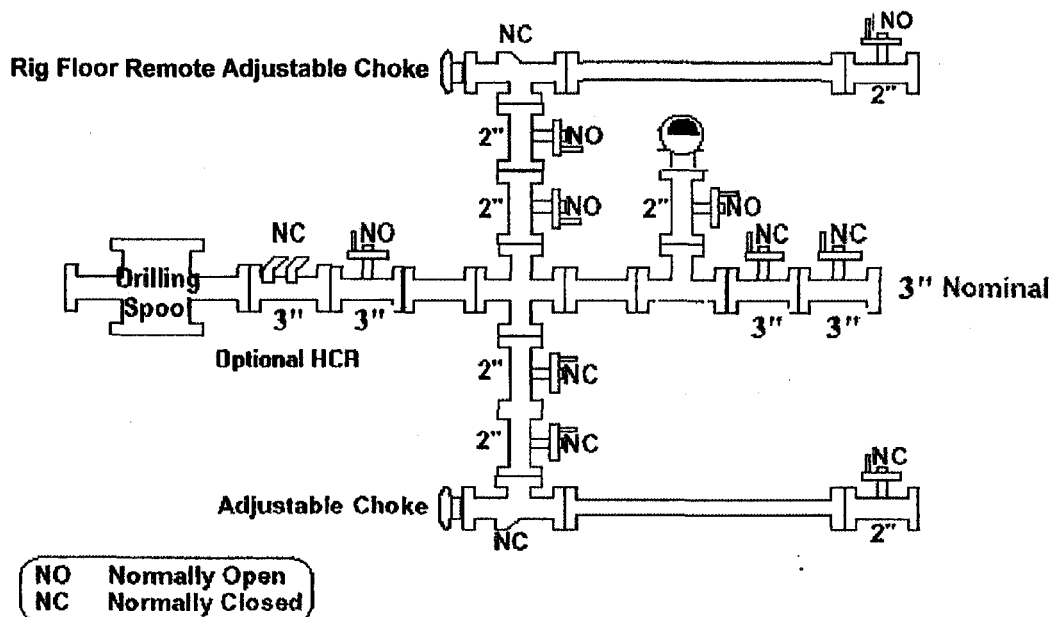
### STACK



### 5,000 psi KILL LINE (2" MINIMUM ID)



### 5,000 psi CHOKE MANIFOLD



ONSHORE ORDER NO. 1  
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**SURFACE USE PLAN**

Page 1

**ONSHORE OIL & GAS ORDER NO. 1**  
**Thirteen Point Surface Use Plan**

An onsite inspection of the subject well was conducted on Wednesday, July 12, 2006 at approximately 9:45 a.m. Weather conditions were clear, cool, and breezy. In attendance at the onsite inspection were the following individuals:

Randy Smith	Permitting Agent	PermitCo Inc.
Brent Iorg	Field Foreman	Samson Resources Company
Scott Ackerman	NRS	Bureau of Land Management
Charlie Sharp	Botanist	Bureau of Land Management
Neal Hillis	Surveyor	Uintah Engineering
Rowdy Brown	Surveyor Hand	Uintah Engineering
Shawn Childs	Project Manager/Biologist	SWCA
Brian Ohearn	Ecologist	SWCA

**1. EXISTING ROADS**

- a. The proposed well site is located approximately 25.9 miles southwest of Ouray, Utah.
- b. Directions to the location from Ouray, Utah are as follows:

From Ouray, UT proceed south 9.1 miles. Turn left and proceed south 2.8 miles. Turn left and proceed south 0.5 miles. Turn right and proceed southwest 2.8 miles. Continue southwest 9.5 miles. Continue west 0.6 miles. Turn right and proceed north 0.6 miles. Turn left onto the proposed access and proceed 30' until reaching the proposed location.
- c. For location of access roads within a 2-Mile radius, see Maps A & B.
- d. There will approximately 0.1 miles of existing road to be re-routed and approximately 30' of new construction.
- e. All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.



- f. Existing roads and newly constructed roads on surface under the jurisdiction of any Surface Managing Agency shall be maintained in accordance with the standards of the SMA.

**2. PLANNED ACCESS ROADS**

- a. There will be approximately 30 feet of new access road.
- b. The new access and the re-routed portion of the road will be flat bladed initially for drilling purposes to a maximum width of 21 feet. If production is established the road will be improved to a crowned and ditched road with a running surface of the road will be 14 feet with a maximum disturbed width of 35 feet, in accordance with Gold Book Standards.
- c. The maximum grade of the new access will be approximately 5%.
- d. No turnouts will be necessary.
- e. No culverts or low water crossings will be necessary.
- f. The new access road was centerline flagged at the time of staking.
- g. Surfacing of the pad and access prior to drilling and completion operations is not anticipated, however, some portions of the access road may require surfacing if the well is productive.
- h. Cattlegards will not be necessary.
- i. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved by the Field Manager in advance.
- j. If at any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligations determined by the authorized officer.
- k. No road right of way will be necessary since all access roads are Class D County Roads.



**3. LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS OF THE PROPOSED LOCATION.**  
**SEE MAP "C"**

- a. Water wells - none
- b. Injection wells - none
- c. Producing wells - none
- d. Drilling wells - none
- e. Shut In wells - none
- f. Abandoned wells - one

**4. PROPOSED PRODUCTION FACILITIES**

- a. Production facilities will be located on the well pad. If production is established a production facility layout will be submitted via Sundry Notice.
- b. All permanent structures (onsite for six months or longer) constructed or installed (including oil well pump jacks) will be painted a flat, nonreflective color to match the standard environmental colors, as determined by the Rocky Mountain Five-State Interagency Committee. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. Colors will match the adjacent vegetation. The actual color will be specified by the Bureau of Land Management.
- c. All site security guidelines identified in 43 CFR 3162.7-5 and Onshore Oil and Gas Order No. 3 shall be followed:
- d. If a gas meter run is constructed, it will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and will be buried downstream of the meter until it leaves the pad. Meter runs will be housed and/or fenced. The gas meter shall be calibrated prior to first sales and shall be calibrated quarterly thereafter. All gas production and measurement shall comply with the provision of 43 CFR 3162.7-3, Onshore Order No. 5 and American Gas Association (AGA) Report No. 3.



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**SURFACE USE PLAN**

Page 4

- e. The tank battery will be surrounded by a berm of sufficient capacity to contain 1-1/2 times the storage capacity of the largest tank. All loading lines and valves will be placed inside the berm surrounding the tank battery. All oil production and measurement shall conform to the provisions of 43 CFR 3162.7-3 and Onshore Oil and Gas Order No. 4.
- f. Production facilities on location may include a lined or unlined produced water pit as specified in Onshore Order No. 7. If water is produced from the well, an Onshore Order No. 7 application must be submitted.
- g. Any necessary pits will be properly fenced to prevent any wildlife entry.
- h. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the Authorized Officer.
- i. All access roads will be maintained as necessary to prevent erosion and accommodate year-round traffic.
- j. The road will be maintained in a safe useable condition.

**5. LOCATION AND TYPE OF WATER SUPPLY**

- a. The proposed water source will be the Nebecker Water Service at the Nebecker Water Station in Myton, UT.
- b. Water will be hauled to location over the roads marked on Maps A and B.
- c. No water well is to be drilled on this lease.
- d. This water source is permitted under Water Right No. 43-1721.

**6. CONSTRUCTION MATERIALS**

- a. Pad construction material will be native (that found in the well pad).
- b. Native material found in the pad may also be used for road upgrading.
- c. The use of materials under BLM jurisdiction will conform with 43 CFR 3610.2-3.
- d. No construction materials will be removed from Federal land.



**7. METHODS OF HANDLING WASTE DISPOSAL**

- a. All fluids contained within the reserve pit will be allowed to evaporate and the pit will be backfilled.
- b. Burning will not be allowed. All trash will be contained in a trash cage and its contents removed at the end of drilling operations and hauled to an approved disposal sight. Trash will be hauled as necessary, but not later than at the completion of drilling operations.
- c. Any salts and/or chemicals which are an integral part of the drilling system will be disposed of in the same manner as the drilling fluid.
- d. Sewage will be placed in a portable chemical toilet or holding tank and disposed of in accordance with state and county regulations.
- e. The produced fluids (other than water) will be produced into a test tank until such time as construction of production facilities is completed. Any spills of oil, gas salt water or other produced fluids will be cleaned up and removed.

**8. ANCILLARY FACILITIES**

There are no airstrips, camps, or other facilities planned during the drilling of the proposed well.

**9. WELLSITE LAYOUT**

- a. See Location Layout and Typical Cross Sections for orientation of rig, cross section of drill pad and cuts and fills.
- b. Six inches of topsoil (or the maximum available) will be salvaged during construction and reserved for use in reclamation.
- c. Topsoil will be stockpiled as shown on the Location Layout.
- d. All wells, whether drilling, producing, suspended, or abandoned, will be identified in accordance with 43 CFR 3162.6



- e. The location of mud tanks; reserve pit, trash cage; pipe racks; living facilities and soil stockpiles will be shown on the Typical Rig Layout.
- f. A flare pit will be located a minimum of 30 feet from the edge of the reserve pit and a minimum of 130 feet from the well head.
- g. Any pits containing fluid will be fenced to prevent wildlife entry.
- h. The reserve pit will be lined with a minimum of 12 mil liner as specified by the State of Utah.

**10. PLANS FOR RESTORATION OF SURFACE**

- a. Immediately upon completion of drilling, all equipment that is not necessary for production shall be removed.
- b. The cuttings pit will be allowed to dry and will then be backfilled.
- c. Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, debris, materials, trash and junk not required for production.
- d. Interim seeding will be done as soon as possible, following rig release. The suggested seed mixture is as follows:

<i><b>Species</b></i>	<i><b>#'s PLS/Acre</b></i>
Galletta	20
<b>TOTAL</b>	20

- e. The abandonment marker will be at least four feet above ground level and will be inscribed with the following: operator name, lease number, well name and surveyed description (township, range, section and either quarter-quarter or footages).
- f. At such time as the well is plugged and abandoned, the operator shall submit a subsequent report of abandonment.



**11. SURFACE/MINERAL OWNERSHIP**

**Access Roads** - All roads are County maintained or are located on lands managed by the BLM.

**Well pad** - The well pad is located on lands managed by the BLM.

**12. OTHER INFORMATION**

- a. A Class III archeological survey has been conducted by Montgomery Archeological Consultants and is attached.
- b. A paleo evaluation has been done by Alden Hamblin and is attached.
- c. A Special Species Plats Status report has been done by SWCA and is attached.
- d. The operator is responsible for informing all persons in the areas who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

-whether the materials appear eligible for the National Register of Historic Places;

-the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and

-a time frame for the AO to complete and expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that required mitigation has been completed, the operator will then be allowed to resume construction.





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CONFIDENTIAL - TIGHT HOLE

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**SURFACE USE PLAN**

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- e. All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved plan of operations, and any applicable Notice to Lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.
- f. A complete copy of the approved APD shall be on location during construction of the location and drilling activities.
- g. There will be no deviation from the proposed drilling and/or work over program without prior approval from the AO. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.h.
- h. "Sundry Notice and Report on Wells" (From 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.
- i. This permit will be valid for a period of one year from the date of approval. An extension period may be granted, if requested, prior to the expiration of the original approval period.
- j. The operator or his contractor shall contact the BLM Offices at 435/259-6111 48 hours prior to construction activities.

**13. LESSEE'S OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION**

Permit Matters

**PERMITCO INC.**

Lisa L. Smith  
14421 County Road 10  
Ft. Lupton, CO 80621  
303/857-9999 (Office)  
303/857-0577 (Fax)

Drilling & Completion Matters

**Samson Resources Company**

370 - 17<sup>th</sup> Street, Suite 3000  
Denver, CO 80202  
Georganne Mitchell  
720/239-4365 (Office)  
720/904-9618 (Fax)



ONSHORE ORDER NO. 1

Samson Resources Company

**NBSW #11-19-20-34**

1859' FSL and 811' FEL

NE SE Section 20, T11S - R19E

Uintah County, Utah

CONFIDENTIAL - TIGHT HOLE

Lease No. UTU-81721

**SURFACE USE PLAN**

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**CERTIFICATION**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Samson Resources Company and their contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

December 14, 2006  
Date:

Venessa Langmacher  
Venessa Langmacher - PERMITCO INC.  
Authorized Agent for:  
Samson Resources Company



# SAMSON RESOURCES CO.

**NBSW #11-19-20-34**

LOCATED IN UINTAH COUNTY, UTAH  
SECTION 20, T11S, R19E, S.L.B.&M.



PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHERLY



- Since 1964 -

**UELS** Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
435-789-1017 uels@uelsinc.com

**LOCATION PHOTOS**

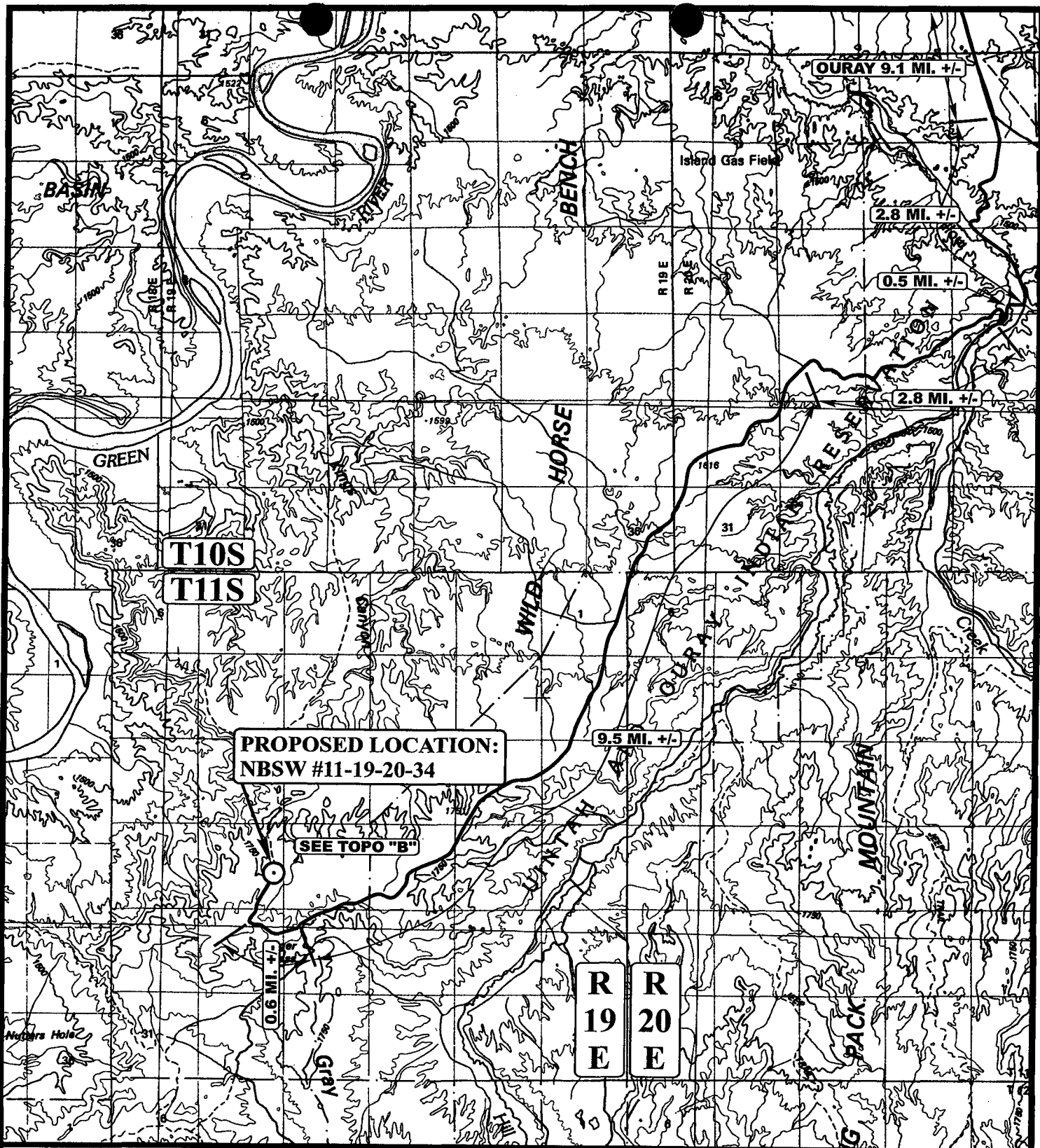
**12 09 04**  
MONTH DAY YEAR

**PHOTO**

TAKEN BY: G.O.

DRAWN BY: C.P.

REV: 03-17-06 L.K.



# **LEGEND:**

○ PROPOSED LOCATION



## **SAMSON RESOURCES CO.**

NBSW #11-19-20-34  
SECTION 20, T11S, R19E, S.L.B.&M.  
1859' FSL 811' FEL



Utah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

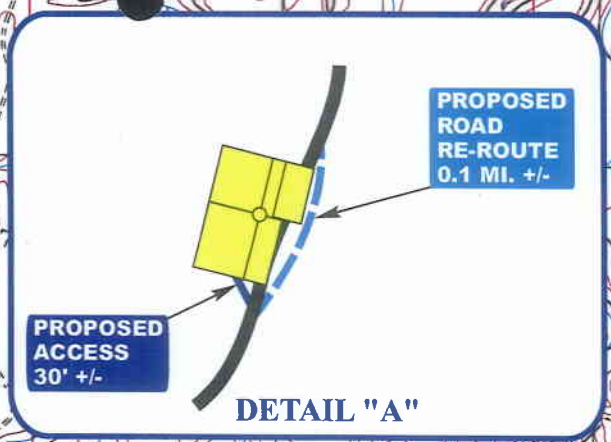
TOPOGRAPHIC 12 09 04  
MAP MONTH DAY YEAR

SCALE: 1:100,000 DRAWN BY: C.P. REV: 03-17-06 L.K.





**T11S**



**PROPOSED LOCATION:**  
NBSW #11-19-20-34

SEE DETAIL "A"

0.6 MI. +/-

0.6 MI. +/-

OURAY 24.7 MI. +/-

**R  
19  
E**

**LEGEND:**

- EXISTING ROAD
- PROPOSED ACCESS ROAD
- PROPOSED ROAD RE-ROUTE



**SAMSON RESOURCES CO.**

**NBSW #11-19-20-34**  
**SECTION 20, T11S, R19E, S.L.B.&M.**  
**1859' FSL 811' FEL**



**Uintah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

**TOPOGRAPHIC**  
**MAP**

**12 09 04**  
MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: C.P. REV: 03-17-06 L.K.





[illegible]R  
19  
E

**NBSW #11-19-20-34**  
**SECTION 20, T11S, R19E, S.L.B.&M.**  
**1859' FSL 811' FEL**

- |   |   |
|---|---|
|  DISPOSAL WELLS  |  WATER WELLS           |
|  PRODUCING WELLS |  ABANDONED WELLS       |
|  SHUT IN WELLS   |  TEMPORARILY ABANDONED |



**Uintah Engineering & Land Surveying**  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

# TOPOGRAPHIC MAP

12	09	04
MONTH	DAY	YEAR

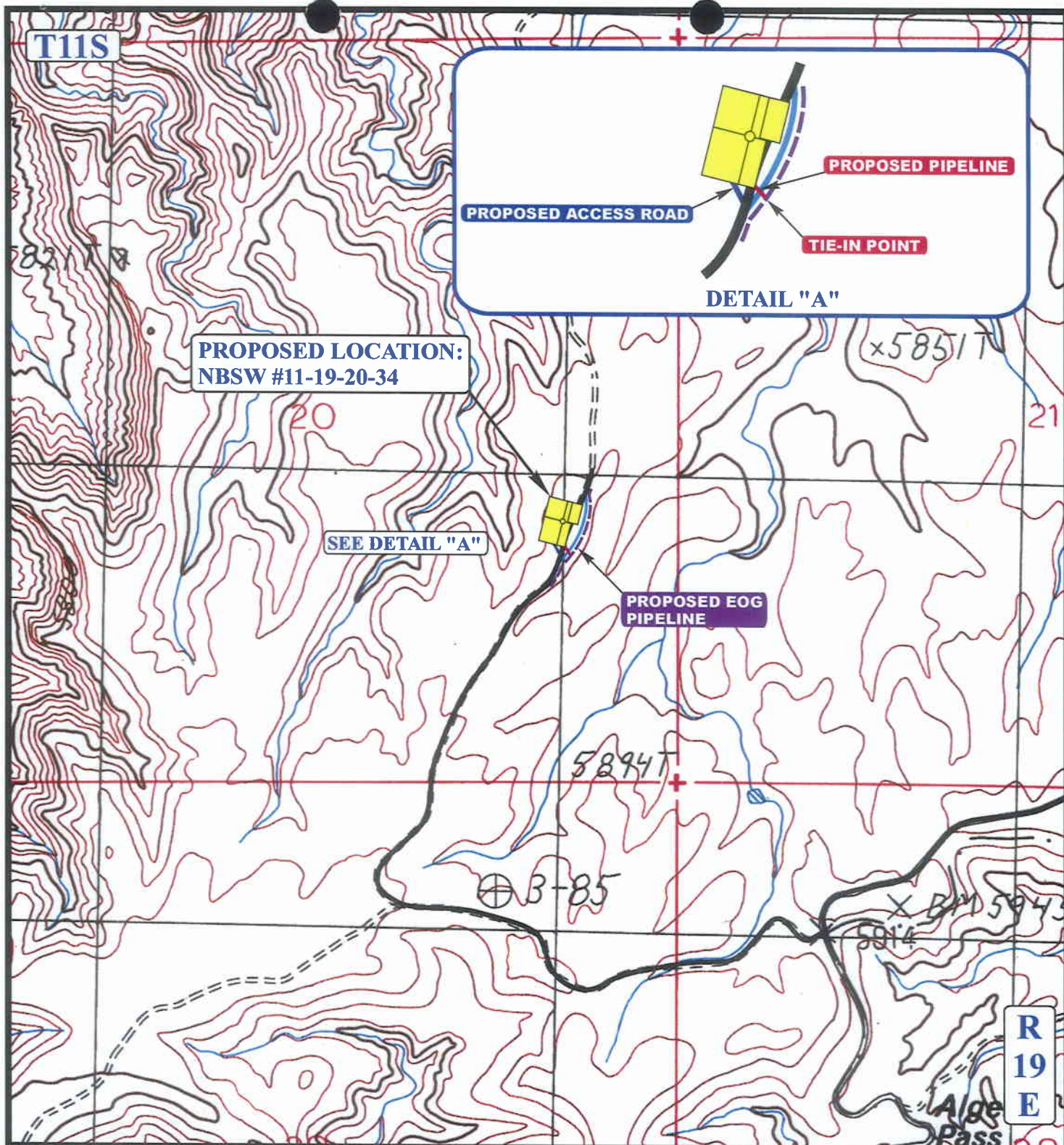
**SCALE: 1" = 2000'**

DRAWN BY: C.P.

REV: 03-17-06 L.K.

C  
TOPO





APPROXIMATE TOTAL PIPELINE DISTANCE = 50' +/-

# LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPOSED PIPELINE (SERVICING OTHER WELLS)



SAMSON RESOURCES CO.

NBSW #11-19-20-34  
SECTION 20, T11S, R19E, S.L.B.&M.  
1859' FSL 811' FEL



Uintah Engineering & Land Surveying  
85 South 200 East Vernal, Utah 84078  
(435) 789-1017 \* FAX (435) 789-1813

TOPOGRAPHIC  
MAP

05 26 06  
MONTH DAY YEAR

SCALE: 1" = 1000' DRAWN BY: B.C. REVISED: 00-00-00

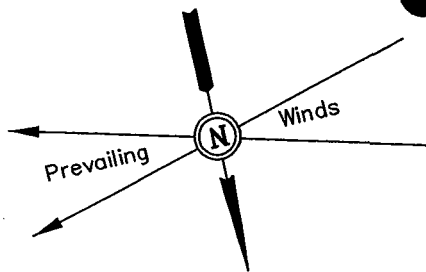
D  
TOPO

# SAMSON RESOURCES CO.

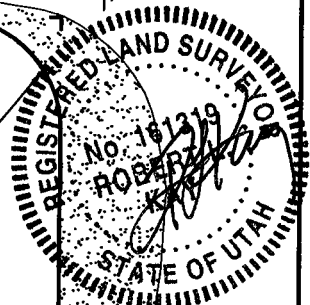
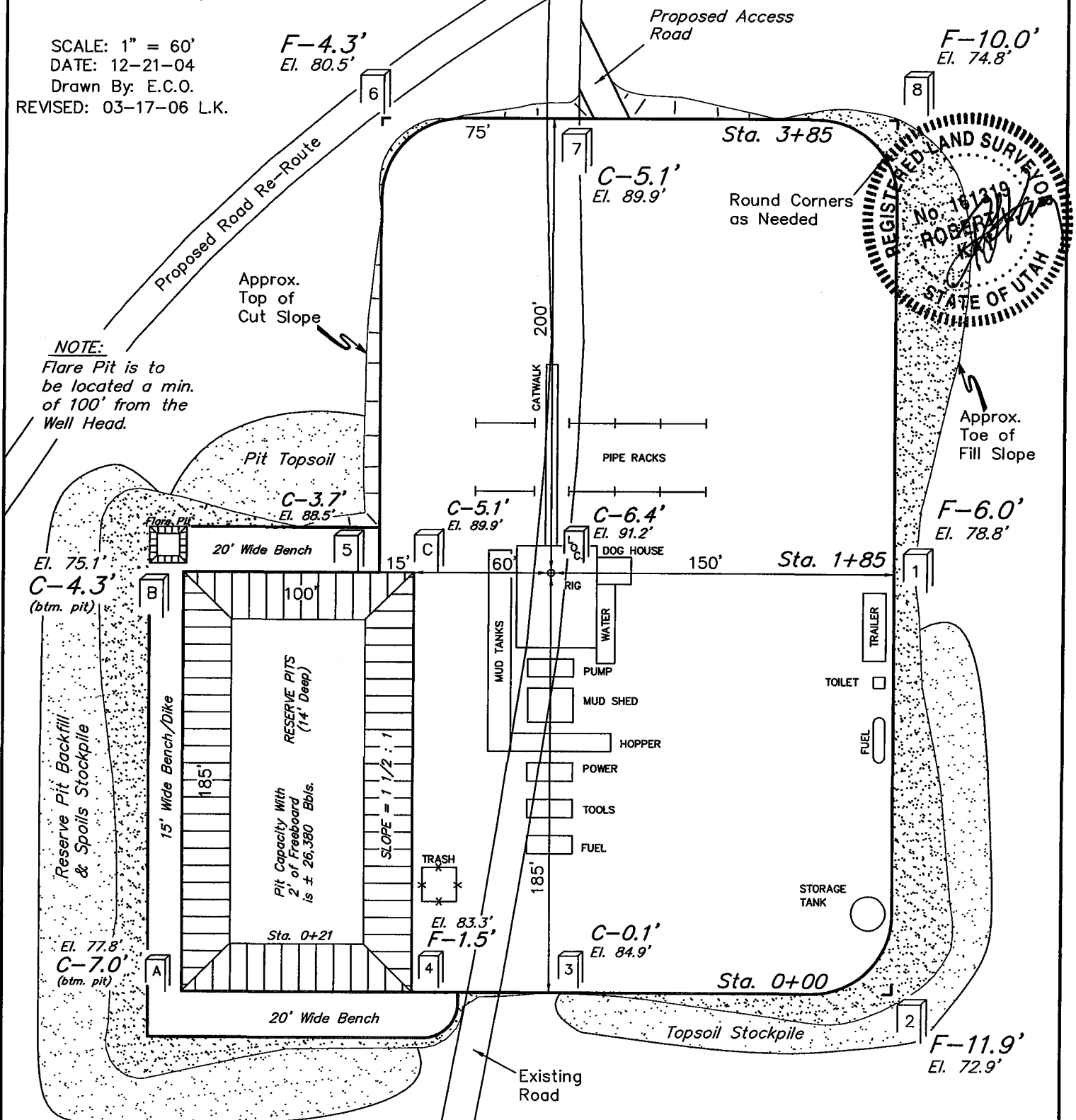
## LOCATION LAYOUT FOR

NBSW #11-19-20-34  
SECTION 20, T11S, R19E, S.L.B.&M.  
1859' FSL 811' FEL

FIGURE #1



SCALE: 1" = 60'  
DATE: 12-21-04  
Drawn By: E.C.O.  
REVISED: 03-17-06 L.K.



Elev. Ungraded Ground at Location Stake = 5891.2'  
Elev. Graded Ground at Location Stake = 5884.8'

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

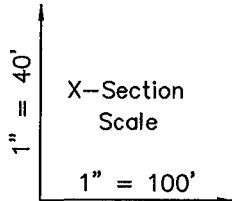


# SAMSON RESOURCES CO.

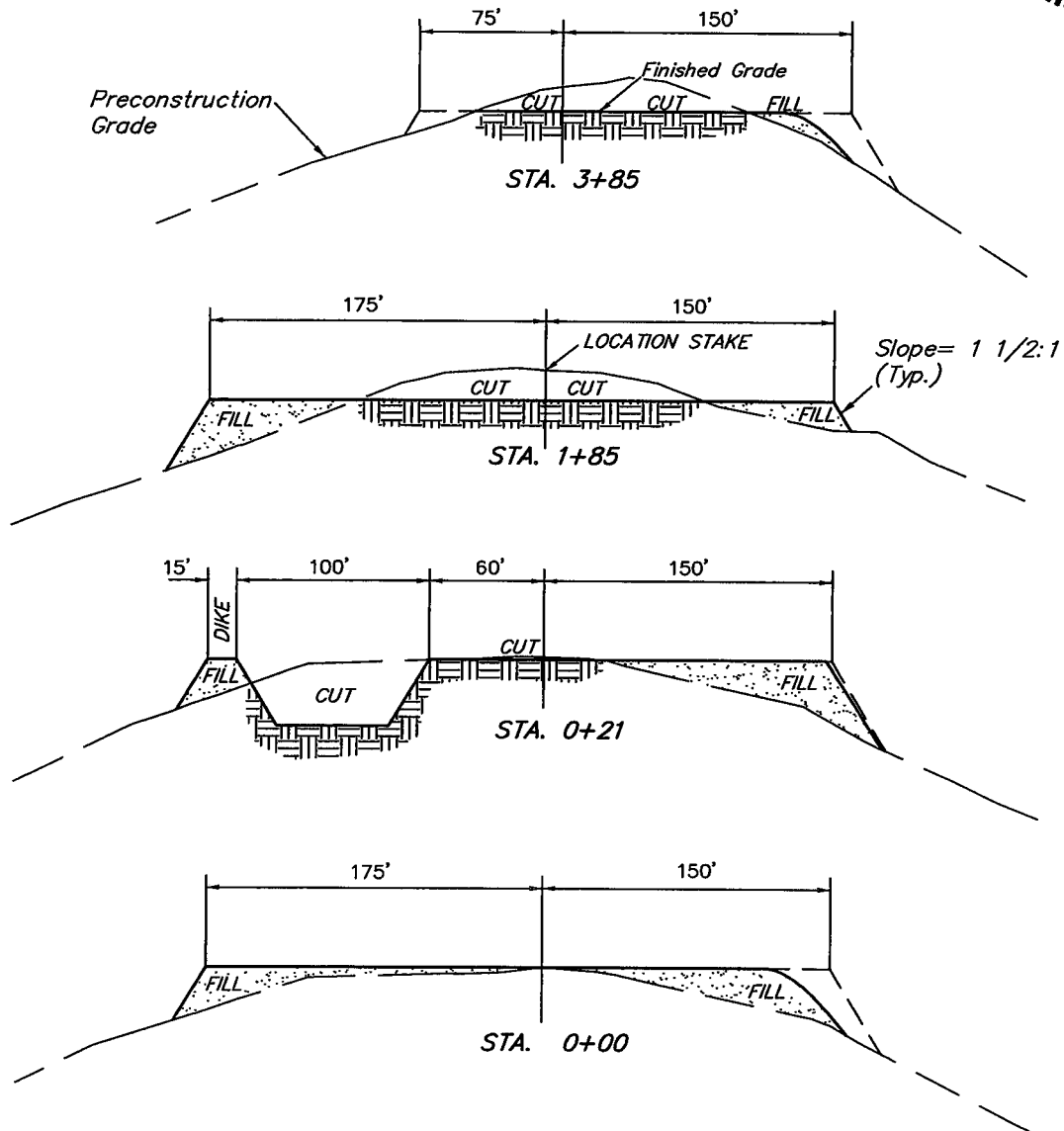
## TYPICAL CROSS SECTIONS FOR

NBSW #11-19-20-34  
SECTION 20, T11S, R19E, S.L.B.&M.  
1859' FSL 811' FEL

FIGURE #2



DATE: 12-21-04  
Drawn By: E.C.O.  
REVISED: 03-17-06 L.K.



### NOTE:

Topsoil should not be Stripped Below Finished Grade on Substructure Area.

### \* NOTE:

FILL QUANTITY INCLUDES 5% FOR COMPACTION

### APPROXIMATE YARDAGES

(6") Topsoil Stripping = 2,470 Cu. Yds.  
Remaining Location = 14,690 Cu. Yds.  
TOTAL CUT = 17,160 CU.YDS.  
FILL = 11,290 CU.YDS.

EXCESS MATERIAL = 5,870 Cu. Yds.  
Topsoil & Pit Backfill = 5,870 Cu. Yds.  
(1/2 Pit Vol.)  
EXCESS UNBALANCE = 0 Cu. Yds.  
(After Rehabilitation)

UINTAH ENGINEERING & LAND SURVEYING  
85 So. 200 East \* Vernal, Utah 84078 \* (435) 789-1017

### **FEDERAL STIPULATIONS**

Any timing restrictions imposed by the Bureau of Land Management for this drill site will be stipulated as a Condition of Approval.



### ARCHEOLOGY

A Class III Archeological Survey will be conducted by Montgomery Archeological Consultants.  
No significant cultural resources were found and clearance for the project has been recommended.

A copy of this report is on file with the BLM.



# PALEONTOLOGY EVALUATION SHEET

---

**PROJECT:** SAMSON RESOURCES NBSW #11-19-20-34

**LOCATION:** 25 miles southwest of Ouray, Utah. Section 20, 1859' FSL 811' FEL, T11S, R18E.

**OWNERSHIP:** PRIV[ ] STATE[ ] BLM[X] USFS[ ] NPS[ ] IND[ ] MIL[ ] OTHER[ ]

**DATE:** June 23, 2006

**GEOLOGY/TOPOGRAPHY:** Uinta Formation, lower part, Eocene Age. Location center stake is next to the main road on a rise on the bench top. There is a bench top cover of weathering rock debris and silty sand. There are sandstone exposures down the west side and some on the west in the pit area

**PALEONTOLOGY SURVEY:** YES [ ] NO Survey [ ] PARTIAL Survey [ X ]

**SURVEY RESULTS:** Invertebrate [ ] Plant [ ] Vertebrate [ ] Trace [ ] No Fossils Found [ X ]

**PALEONTOLOGY SENSITIVITY:** HIGH [ ] MEDIUM [ ] LOW [ X ] (PROJECT SPECIFIC)

**MITIGATION RECOMMENDATIONS:** NONE [ X ] OTHER [ ] (SEE BELOW)

There is always some potential for discovery of significant paleontological resources in the Uinta Formation. If significant vertebrate fossils (mammals, crocodiles, complete turtle shells, etc.) are encountered during construction, work should stop in that area and a paleontologist contacted to evaluate the material discovered.

**PALEONTOLOGIST:** Alden H. Hamblin

*A.H. Hamblin Paleontological Consulting, 3793 N. Minersville Highway, Cedar City, Utah 84720 (435) 867-8355*  
Utah State Paleontological Permit # 04-339, BLM paleontological Resources Permit # UT-S-05-02,  
Ute Tribe Access Permits – 03/31/06 & 09/30/06. Utah Professional Geologist License – 5223011-2250.

---

## SPECIAL STATUS PLANT SPECIES REPORT

---

### SAMSON RESOURCES ACCESS ROADS, PIPELINES, AND WELL LOCATIONS

11-19-20-34✓  
11-19-21-33

SWCA Environmental Consultants

#### PROPOSED PROJECT:

Samson Resources proposes to drill proposed wells 33 and 34 in Sections 20 and 21, Township 11 South and Range 19 East, in Uintah County, Utah. The proposed wells are located approximately 25 miles southwest of Ouray, Utah. Approximately 3,200 feet of new road would be constructed to access the proposed wells. If the wells go into production, approximately 6,950 feet of surface gas lines would be laid along the proposed access roads. If dry, the wells would be plugged and abandoned as per BLM and State of Utah requirements.

#### SITE DESCRIPTION:

The proposed project area is underlain by sedimentary deposits of the Uinta Formation of Late Middle Eocene age at an elevation of approximately 5,800'. Soil in the project area is sandy, sandy clay loam and clay loam with surface rocks. The project area consists of rolling hills cut by a network of washes. Slopes within the project area range from 0-15%. A small amount of surface bedrock outcropping is present.

The vegetation in the project area is a desert shrub community consisting of shadscale saltbush, winterfat, Mormon tea, Gardner's saltbush, mat saltbush, four-winged saltbush, rabbitbrush, and greasewood. The understory is sparse and includes Indian ricegrass, galleta, scarlet globemallow, bud sagebrush, spring parsley, and textile onion. Halogeton can be found in small amounts within the native vegetation. For a complete list of common plants associated with the desert shrub community in the project area see Appendix B.

#### SURVEY METHODOLOGY:

The U.S. Fish and Wildlife Service list of threatened and endangered species for Uintah County, past survey reports and environmental documents were reviewed to determine which federally listed threatened, endangered and candidate plant species, and Utah/BLM sensitive species have the potential to occur in Uintah County. Data on existing soils, geology, elevations, and vegetation types within the proposed pipeline corridor were used to determine which of these species have potential to occur within the project area. In-house

Geographic Information System layers were examined for known locations of and suitable habitat for special status plant species within the project area.

**DETERMINATIONS AND RECOMMENDATIONS:**

A site-specific survey of the proposed well locations, access roads and pipelines conducted by SWCA Environmental Consultants, Inc. on July 10, 2006 have determined that the area does not contain habitat suitable to support special status plant species. Because there is no suitable habitat for and therefore no potential for occurrence of special status plant species within the area of proposed surface disturbance, it is my professional opinion that construction of the proposed well sites and associated access roads will not affect special status plant species.

---

**Shawn Childs**  
**Project Manager/ Biologist**

---

**7/12/06**

**Date**



# Appendix A – Special Status Plant Species

Species	Status	Habitat	Potential for and/or Occurrence
<i>Arabis vivariensis</i> Park rock cress	Sensitive	Webber Formation sandstone and limestone outcrops in mixed desert shrub and pinyon-juniper communities. 5000-6000ft.	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.
<i>Astragalus equisolensis</i> Horseshoe milkvetch	Candidate	Duchesne River Formation soils in sagebrush, shadscale, horse brush and mixed desert shrub communities. 4790-5185ft.	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.
<i>Astragalus hamiltonii</i> Hamilton milkvetch	Sensitive	Duchesne, Mowery shale, Dakota and Wasatch Formation soils in pinyon-juniper and desert shrub communities. 5240-5800ft	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.
<i>Cirsium ownbeyi</i> Ownbey thistle	Sensitive	East flank Uinta Mountains. Sagebrush, juniper and riparian communities. 5500-6200ft.	None - No suitable habitat. Formations and associated soils do not occur in the analysis area. Out of range.
<i>Habenaria zothecina</i> Alcove bog-orchard	Sensitive	Moist stream banks, seeps, hanging gardens in mixed-desert shrub, pinyon juniper, and oak brush (4,360-8,690 feet).	None - Soils and associated riparian areas are not present in project areas.
<i>Hymenoxys lapidicola</i> Rock hymenoxis	Sensitive	Rock crevices in pinyon-juniper. Uintah County endemic (6,000-8,000 feet).	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.
<i>Lepidium huberi</i> Huber's pepperplant	Sensitive	Rock crevices, eroding parent material and alluvial soils of the Moenkopi, Navajo, Chinle and Formations in the Uintah and Green River Formation in the Bookcliffs. 5600-8000 ft.	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.
<i>Penstemon acaulis</i> Stemless penstemon	Sensitive	Daggett County. Semi-barren substrates in pinyon-juniper and sagebrush-grass communities. 5840-7285 ft.	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.

# Appendix A – Special Status Plant Species

Species	Status	Habitat	Potential for and/or Occurrence
<i>Penstemon gibbensii</i> Gibbens penstemon	Sensitive	Brown's Park in Daggett County. Sandy and shale (Green River Shale) bluffs and slopes with juniper, thistle, Eriogonum, Elymus, serviceberry, rabbit brush & Thermopsis 5500-6400 ft.	None - No suitable habitat. Formations and associated soils do not occur in the analysis area. Out of Range.
<i>Penstemon goodrichii</i> Goodrich penstemon	Sensitive	Lapoint-Tridell-Whiterocks area. Duchesne River Formation on blue gray to reddish bands of clay badlands. Elevations 5590 to 6215 ft.	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.
<i>Penstemon grahamii</i> Graham Beardtongue	Candidate	East Duchesne and Uintah Counties. Evacuation Creek and Lower Parachute Member of the Green River Formation. Shale knolls in sparsely vegetated desert shrub and pinyon-juniper communities. 4600-6700 ft	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.
<i>Penstemon scariosus</i> var. <i>albifluvis</i> White River Beardtongue	Candidate	Evacuation Creek and Lower Parachute Creek Member of the Green River Formation on sparsely vegetated shale slopes in mixed desert shrub and pinyon-juniper communities. 5000-6000ft	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.
<i>Schoenocrambe argillacea</i> Clay Reed-Mustard	Threatened	Bookcliffs On the contact zone between the upper Uinta and lower Green River shale formations in mixed desert shrub of Indian ricegrass and pygmy sagebrush. 5000-5650 ft.	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.

**Appendix A – Special Status Plant Species**

Species	Status	Habitat	Potential for and/or Occurrence
<i>Schoenocrambe suffrutescens</i> Shrubby Reed-mustard	Endangered	Evacuation Creek and lower Parachute Creek Members of the Green River Formation on calcareous shale in pygmy sagebrush, mountain mahogany, juniper and mixed desert shrub communities. 5400-6000ft.	None - No suitable habitat. Formations and associated soils do not occur in the analysis area.
<i>Sclerocactus glaucus</i> ( <i>Sclerocactus brevispinus</i> ) Uinta Basin hookless cactus	Threatened	Gravelly hills and terraces on Quaternary and tertiary alluvium soils in cold desert shrub communities. 4700-6000ft.	None – No suitable habitat. Formations and associated soils do not occur in the analysis area.
<i>Spiranthes diluvialis</i> Ute lady's tresses	Threatened	Streams, bogs and open seepages in cottonwood, salt cedar, willow and pinyon-juniper communities on the south and east slope of the Uintah Range and it's tributaries, and the Green River from Browns Park to Split mountain. Potentially in the Upper reaches of streams in the Book Cliffs. 4400-6810ft.	None - Soils and associated riparian areas are not present in project areas.

**Appendix B - Common Plants in the Desert Shrub Community in the Project Area.**

Scientific Name	Common Name
<b><i>Shrubs</i></b>	
<i>Atriplex canescens</i>	Four-winged saltbush
<i>Atriplex confertifolia</i>	Shadscale
<i>Atriplex corrugata</i>	Mat saltbush
<i>Atriplex gardneri</i>	Gardner's saltbush
<i>Artemisia spinescens</i>	Bud sage
<i>Ceratoides lanata</i>	Winterfat
<i>Chrysothamnus</i> spp.	Rabbitbrush species
<i>Ephedra nevadensis</i>	Mormon tea
<i>Sarcobatus vermiculatus</i>	Greasewood
<i>Tetradymia spinosa</i>	Horsebrush
<b><i>Grasses and Forbs</i></b>	
<i>Agropyron dasystachyum</i> var. <i>dasystachyum</i>	Thickspike wheatgrass
<i>Allium textile</i>	Textile onion
<i>Arenaria</i> spp.	Sandwort
<i>Cleome lutea</i>	Yellow beeplant
<i>Cymopterus</i> spp.	Spring parsley
<i>Eriogonum inflatum</i>	Desert trumpet
<i>Descurainia pinnata</i>	Tansy mustard
<i>Hilaria jamesii</i>	Galleta
<i>Phacelia crenulata</i>	Scorpionweed
<i>Phlox</i> spp.	Phlox
<i>Sitanion hystrix</i>	Squirreltail
<i>Sphaeralcea</i> spp.	Globemallow
<i>Sporobolus airoides</i>	Alkali sacaton
<i>Stipa hymenoides</i>	Indian ricegrass
Plant names are using Utah Flora 2003.	



SUITE 3000  
370 17<sup>TH</sup> ST  
DENVER CO 80202  
USA  
720/587-2500  
FAX: 720/904-1392

June 30, 2006

Bureau of Land Management  
Vernal Field Office  
170 S. 500 E.  
Vernal, UT 84078

Attn: Minerals

Re: All Wells  
Uintah County, Utah

Gentlemen:

This letter is to inform you that Permitco Inc. is authorized to act as Agent and to sign documents on behalf of Samson Resources Company when necessary for filing county, state and federal permits including Onshore Order No. 1, Right of Way applications, etc., for the above mentioned well.

It should be understood that Permitco is acting as Agent only in those matters stated above and is not responsible for drilling, completion, production or compliance with regulations.

Samson Resources Company agrees to accept full responsibility for operations conducted in order to drill, complete and produce the above-mentioned well.

Sincerely,

SAMSON RESOURCES COMPANY

A handwritten signature in cursive script that reads 'Georganne Mitchell'.

Georganne Mitchell  
Surface Use Landman

**WORKSHEET**  
**APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 12/27/2006

API NO. ASSIGNED: 43-047-38945

WELL NAME: NBSW 11-19-20-34

OPERATOR: SAMSON RESOURCES ( N8020 )

CONTACT: VENESSA LANGMACHER

PHONE NUMBER: 303-857-9999

PROPOSED LOCATION:

NESE 20 110S 190E

SURFACE: 1859 FSL 0811 FEL

BOTTOM: 1859 FSL 0811 FEL

COUNTY: Uintah

LATITUDE: 39.84381 LONGITUDE: -109.8078

UTM SURF EASTINGS: 602001 NORTHINGS: 4410892

FIELD NAME: WILDCAT ( 1 )

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-81721

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: MNCS

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

☒ Plat  
☒ Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. NM-2037 )  
☒ Potash (Y/N)  
☒ Oil Shale 190-5 (B) or 190-3 or 190-13  
☒ Water Permit  
(No. 43-1721 )  
☒ RDCC Review (Y/N)  
(Date: )  
☒ Fee Surf Agreement (Y/N)  
☒ Intent to Commingle (Y/N)

LOCATION AND SITING:

\_\_\_ R649-2-3.

Unit: \_\_\_\_\_

☒ R649-3-2. General

Siting: 460 From Qtr/Qtr & 920' Between Wells

\_\_\_ R649-3-3. Exception

\_\_\_ Drilling Unit

Board Cause No: \_\_\_\_\_

Eff Date: \_\_\_\_\_

Siting: \_\_\_\_\_

\_\_\_ R649-3-11. Directional Drill

COMMENTS: \_\_\_\_\_

STIPULATIONS: \_\_\_\_\_

1- *Lease Approval*  
2- *Spacing Stip*



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STATE 1-16  
⊙

T11S R19E

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NBSW  
11-19-20-34  
⊙

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OPERATOR: SAMSON RES CO (N8020)

SEC: 20 T.11S R. 19E

FIELD: WILDCAT (001)

COUNTY: UINTAH

SPACING: R649-3-2 / GENERAL SITING

## Field Status

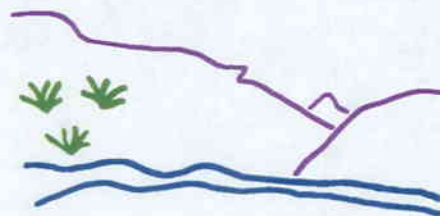
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

## Unit Status

- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

## Wells Status

- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- DRILLING



Utah Oil Gas and Mining



PREPARED BY: DIANA MASON  
DATE: 27-DECEMBER-2006



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

December 28, 2006

Samson Resources Company  
370 17th St., Ste. 3000  
Denver, CO 80202

Re: NBSW 11-19-20-34 Well, 1859' FSL, 811' FEL, NE SE, Sec. 20, T. 11 South,  
R. 19 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-38945.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor (via e-mail)  
Bureau of Land Management, Vernal District Office

Operator: Samson Resources Company  
Well Name & Number NBSW 11-19-20-34  
API Number: 43-047-38945  
Lease: UTU-81721

Location: NE SE Sec. 20 T. 11 South R. 19 East

### Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

February 15, 2008

Samson Resources Company  
370 17<sup>th</sup> St., Ste. 3000  
Denver, CO 80202

Re: APD Rescinded – NBSW 11-19-20-34, Sec. 20, T. 11S, R. 19E  
Uintah County, Utah API No. 43-047-38945

Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on December 28, 2006. No drilling activity at these locations has been reported to the division. Therefore, approval to drill these wells is hereby rescinded, effective February 15, 2008.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject locations.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal

